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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,401

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Dan Chen

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EXAMINER

AMBAYE, MEWALE A

ART UNIT

PAPER NUMBER

4124

MAIL DATE

DELIVERY MODE

02/27/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<i>Office Action Summary</i>	Application No.	Applicant(s)	
	10/580,401	CHEN ET AL.	
	Examiner	Art Unit	
	MEWALE AMBAYE	4124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/24/2006, 07/17/2006</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

DETAILED ACTION

1. Claims 1-21 are pending.

Oath/Declaration

2. The oath/Declaration filed on 03/13/2007 is accepted by the examiner.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

4. The information disclosure statement filed on 07/17/06 is in compliance with 37 CFR 1.97. Accordingly, the information discloser statement is being considered by the examiner.

*Drawings*

5. The drawings filed on 05/24/06 are accepted by the examiner.

*Claim Rejections - 35 USC § 102*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-2, 5-7, 11-18 & 20 are rejected are under 35 U.S.C. 102(e) as being anticipated by Li et al (hereinafter referred as Li) US Pub. No. 2006/0182119 A1.

8. As per claims 1 and 16: Li discloses a method/device (*Edge Router*) for realizing QoS guarantee in a MPLS network, including: creating individual QoS resource list in each edge router to record resource state corresponding to a path (*See Page 3; Para. 0040 & 0044*); said each edge router assigning resources to a user terminal which makes a request based on said QoS resource list and updating the QoS resource list (*See Page 3; Para. 0046*).
9. As per claim 6: Li discloses a method for establishing a QoS data path in a MPLS network, including: a user terminal sending a QoS resource request to an ingress edge router (*See Page 3; Para. 0040*); said edge router determining information of a path to an egress edge router of the QoS resource request (*See Page 3; Para. 0044*); said ingress edge router determining whether the resource request is accessed or rejected based on resource state corresponding to the path recorded in its QoS resource list (*See Page 3; Para. 0047*); and when the resource request is determined to be accessed, updating said QoS resource list (*See Page 3; Para. 0047 & 0049*).
10. As per claim 12: Li discloses a method for terminating QoS data transmission in a MPLS network, including: an ingress edge router receiving a resource releasing request from a user terminal (*See Page 8; Para. 0171*); said ingress edge router releasing the resources occupied by said user terminal and said ingress edge router modifying its QoS resource list which records resource state corresponding to a path (*See Page 8; Para. 0172 & 0174*).
11. As per claim 2, 7, 13 & 17: Li discloses a method characterized in that the resource states of the paths from the edge router to all the other edge routers in same domain are recorded in said QoS resource list (*See page 2; Para. 0029*).

12. As per claims 5, 11 & 15: Li discloses a method characterized in that said QoS resource list at least includes information of the egress edge router, service class, LSP resources and available resources (*See Page 2; Para. 0022*).

13. As per claim 14: Li discloses a method characterized in that the step of modifying the QoS resource list further includes: adding corresponding amount to available QoS resources corresponding to an egress edge router of said QoS data transmission in the QoS resource list (*See Page 8; Para. 0172*).

14. As per claim 18: Li discloses a method further including a route list and a MPLS list based on which said QoS resource list is created and corresponds to LSP resource state of the MPLS network (*See Page 8; Para. 0179*).

15. As per claim 20: Li discloses a method characterized in that said QoS resource list at least includes information of the egress edge router, service class, LSP resources and available resources (*See Page 8; Para. 0179*).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 3-4, 8-10, 19 & 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. US Pub. No. 2006/0182119 in view of Matsubara et al (hereinafter referred as Matsubara) US Patent No. 7,215,640 B2.

17. As per claim 3: Li discloses a method characterized in that the step of creating a QoS resource list further includes: said edge router obtaining resource information of the path from the edge router to each of the other edge routers in the same domain based on LSP resource state information and route information of said MPLS network, and saving the resource information in the QoS resource list (*See Page 2; Para. 0029*).

Li does not explicitly teach pre-configuring LSPs based on service class to set different LSPs for different service classes.

However, Matsubara discloses pre-configuring LSPs based on service class to set different LSPs for different service classes (*See Col 10; lines 19-22*).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to employ the teaching method of Li within Matsubara method in order to accomplish all of the path set-up procedures before any request for a QoS path is received is the ultimate way to implement QoS (*See Col 2; lines 49-51*).

18. As per claim 4: The combination of Li and Matsubara disclose a method characterized in that the step of assigning resources to a user terminal which makes a request further includes: said edge router receiving a resource request from the user terminal (*See Li Col 3; Para. 0040*) said edge router searching said QoS resource list for available information of the requested resources based on an egress edge router in said resource request (*See Matsubara Col 6; lines 50-53*); said edge router determining whether the resource request is accessed or rejected based on the available information of said requested resources (*See Matsubara Col 6; lines 53-63*); when the resource request is determined to be accessed, modifying the available information of

the requested resources in said QoS resource list and sending an acknowledgement message to said user terminal (*See Matsubara Col 11; lines 30-33*).

19. As per claim 8: The combination of Li and Matsubara disclose a method characterized in that the step of determining further includes: comparing available resources of the requested resources in said QoS resource list with bandwidth resources requested in said resource request (*See Matsubara Col 6; lines 64-67*); if said available resources are less than said bandwidth resources, sending a message of rejecting access to said user terminal, otherwise allowing said user terminal to access (*See Matsubara Col 7; lines 15-21*).

20. As per claim 9: The combination of Li and Matsubara disclose a method characterized in that the step of allowing the user terminal to access further includes: when the resource request is not cross-domain, said edge router sending the resource request to a destination user terminal in said resource request and waiting for an acknowledgement message from the destination user terminal (*See Li Page 8; Para. 0178*); when the resource request is cross-domain, searching for a domain which is close to the destination user terminal in said resource request and has available resources larger than said bandwidth resources, sending the resource request to an edge router of the domain and waiting for an acknowledgement message from the edge router of the domain (*See Li Page 8; Para. 0175*); after receiving the acknowledgement message, said edge router sending the acknowledgement message to said user terminal; and after receiving the acknowledgement message, said user terminal starts the data transmission (*See Matsubara Col 11; lines 30-33*).

21. As per claim 10: The combination of Li and Matsubara disclose a method characterized in that the step of updating the QoS resource list further includes: subtracting the bandwidth

resources requested in said QoS resource request from the available resources of the corresponding requested resources in said QoS resource list (*See Matsubara Col 7; lines 15-21*).

22. As per claim 19: The combination of Li and Matsubara disclose a method further including a data transmission unit which, under the control of said access and resource control unit, performs operations such as classifying, marking, queuing and scheduling etc. on data transmitted by the user terminal (*See Matsubara FIG 5. step 178*).

23. As per claim 21: The combination of Li and Matsubara disclose a MPLS network for realizing QoS guarantee, including: an edge router according to any one of claims 16 to 20 (*See Matsubara Col 10; lines 37-40*).

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mewale Ambaye whose telephone number is (571) 270-7634. The examiner can normally be reached on M - F, 8:00 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reach on (571) 272-3155. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from their Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.



Art Unit: 4124

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)?

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (In USA or Canada) or 571-272-1000.

/M. A./

Examiner, Art Unit 4124

/HUY VU/

Supervisory Patent Examiner, Art Unit 2416